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Difficulties in Accessing a Representative Pilot Force: The Demographic Challenge and Views of Minority Pilot Focus Groups

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Summary

The United States Air Force has expressed concern about under representation of minority officers in its pilot force. Historically, there have been relatively smaller percentages of African-American and Hispanic officers among Air Force pilots than might be expected from other demographic and educational data. As part of a more general study of demographic trends and their effects on the Air Force personnel system, researchers were tasked to gather information pertaining to minority community attitudes about the military and flying careers. The researchers gathered this information from focus group interview sessions among African-American and Hispanic pilots and pilot trainees and from Air Force Academy and Air Force Reserve Officer Training Corps (AFROTC) minority recruiters. The responses highlight reasons for the lack of interest in flying careers among the most competitive minority students. They also offer suggestions for enhancing the selection/recruitment and training processes to attract a greater percentage of the highly qualified minority students and allow them to compete

successfully for pilot positions. This paper presents a brief summary of that report (Barucky, 1998).

I. Background: A Concern About Pilot Demographics

An ongoing concern of Air Force personnel managers is to ensure that the Air Force officer corps is representative of the racial and ethnic makeup of the country. For many years the ethnic and racial mix in the enlisted force has been such that minorities, especially members of the African-American community, have been adequately represented. While representation among the officer corps has not reflected the percentages of minorities within the population at large, it has been representative of the percentages of minorities among college graduates. As a college degree is a prerequisite for commissioned service, the Air Force has tried to ensure that it was getting its fair share of that somewhat smaller, but growing, pool of talent. As shown in Figure 1, the officer accessions for most of the 1990s have reflected that effort, as approximately 10 to 18

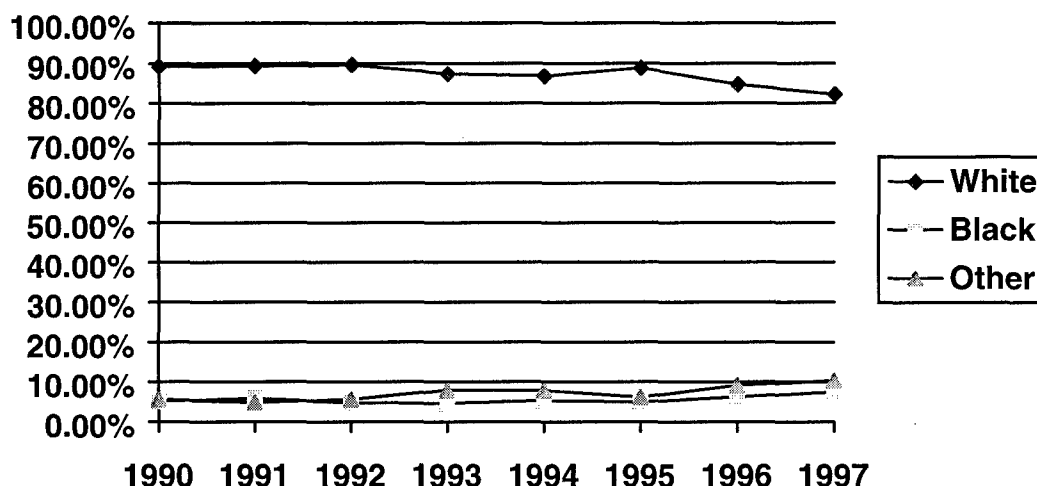


Figure 1. Percentages of white, black, and other minority officer accessions, 1990-97

percent of the officer corps has been made up of minority members. And, more specifically, the African-American representation has consistently been about 6 to 8 percent, a number that has reflected the percentage of African Americans among college graduates in the age-eligible group.

Although these numbers indicate the Air Force has been able to maintain its representative portion of the minority college graduate population, there has been one area in which the representation of minority officers has prompted some concern, and that is within the rated officer force, primarily among those officers attaining the pilot rating. As a substantial portion of the top leadership positions in the Air Force have traditionally been held by pilots, a disparity in minority representation among this group has posed some concern throughout the 1990s. Figure 2 displays the percentage of African-American pilots from 1990 to 97, and it indicates that they generally have made up less than 2 percent of the pilot force. Hispanic pilot representation has also been between 1 to 2 percent. The continuance of these small minority pilot percentages is illustrated most clearly in Figure 3, which shows the minority pilot percentages for September, 1999.

The Proposed Study

Air Force planners' concerns with the relatively small percentages of African-American and Hispanic officers among Air Force pilots and a perceived difficulty in attracting highly qualified minorities into Air Force flying programs resulted in a request for focus group research to determine minority groups' attitudes about pursuing a flying career. This effort was an extension to a 1997 study of the effect of future demographic and socio-economic trends on the Air Force personnel system by Stone, Turner, and Looper (1997), and was to provide insights regarding African-American perceptions and attitudes about, and motivation toward, military service and an Air Force flying career.

The focus group sessions were designed to accomplish four objectives:

- (1) determine minority attitudes about an Air Force officer career
- (2) determine minority attitudes about a flying career

- (3) identify potential obstacles to recruitment and development of minority pilots
- (4) elicit recommendations for improving minority interest/participation in Air Force flying careers.

The Subjects

To gather these data within a relatively short time frame, the researchers were asked to complete small-group interview sessions among African-American and Hispanic pilots or pilot trainees as well as among US Air Force Academy (USAF) and Air Force Reserve Officer Training Corps (AFROTC) minority recruiters, who interacted frequently with members of minority communities, providing information and guidance to potential candidates for those two officer commissioning programs. A total of 38 subjects, both civilian and military, participated in the formal, small-group sessions conducted at three Air Force bases (AFBs), the USAF Academy, and a civilian university flying program. A summary of the background of the total sample is included at Table 1. Near the end of the study, after focus group data had been compiled, additional information was gathered from representatives of public and private agencies and aviation-related professional organizations providing aviation awareness education to minority communities. Included among this group were the following organizations:

- National Coalition for Aviation Education organizations (e.g., Aircraft Owners and Pilots Association or the Experimental Aircraft Association)
- National Aviation and Space Education Alliance
- Federal Aviation Administration Aviation Career Education ("ACE") Camps
- National Aeronautics and Space Administration (NASA) Education Programs
- Organization of Black Airline Pilots
- Minority Aviation Education Association
- Icarus Foundation
- Jackson Foundation
- Delaware Aerospace Education Foundation
- Tuskegee Airman, Inc.

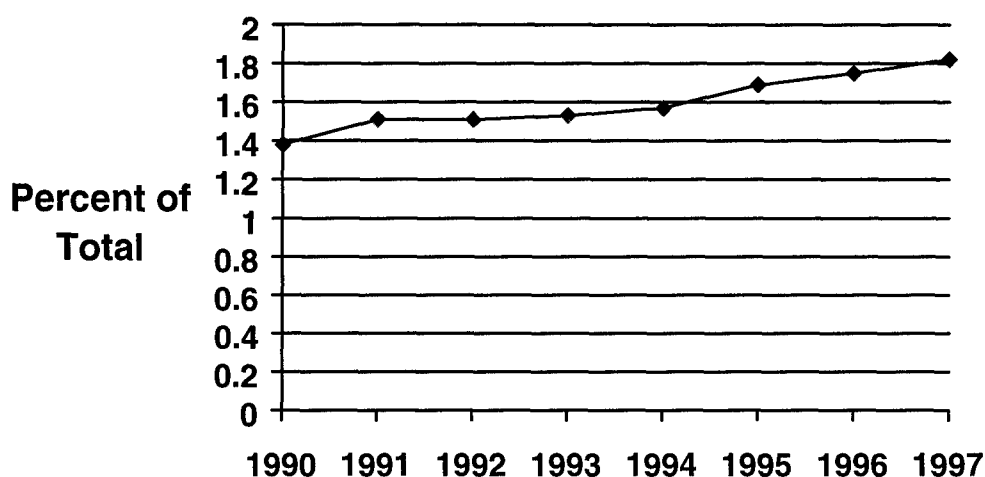


Figure 2. Percentage of African-American pilots in USAF pilot force

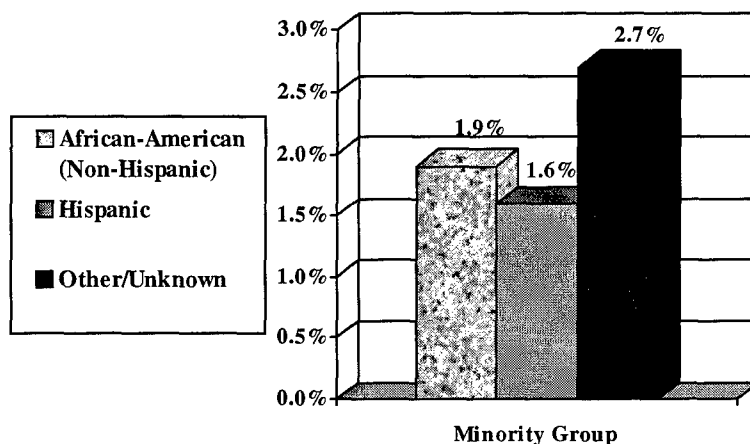


Figure 3: Percentage minorities in USAF pilot force (September 1999)

Table 1. Demographic make-up for focus groups

Racial/Ethnic Status						
Focus Group	Total Number in Group	African-American	Hispanic	Caucasian	Asian-American	Female
AFROTC Recruiters	7	6	0	1	0	0
USAFA Recruiters	7	6	1	0	0	2
Laughlin AFB	11	3	3	0	0	2
Student Pilots						
Instructor Pilots		4	1	0	0	
Luke AFB F-16 Pilots	5	5	0	0	0	0
Delaware State U.	8	5	0	0	1	2
Student Pilots						
Graduate Pilots		2	0	0	0	
Total	38	31	5	1	1	6

II. The Focus Group Methodology

In each session the interviewers gathered background information about the participants, asked them to comment on their own experiences and interest in a flying career, and solicited their impressions of the perceptions of minorities in the communities they were familiar with, regarding a flying career. More specifically, the discussions were structured to elicit their impressions about:

- (1) minority members' interest in and motivation toward a military, and especially an Air Force, career.
- (2) minority members' interest in and motivation toward pursuing a flying career.
- (3) minorities' perceptions of their ability to qualify for an Air Force aviation position.
- (4) factors which affected their own decisions to become an Air Force aviator.
- (5) the current attitudes of the experienced Air Force pilots toward military life and a flying career.
- (6) recommendations for improving minority attitudes/interest in an Air Force flying career.

The method of collecting the focus group data was primarily through structured small-group interview sessions. The meetings with active duty pilots or pilot trainees, at Laughlin and Luke AFBs, were conducted face-to-face by one interviewer, while at Delaware State University, three researchers were involved in the face-to-face data gathering with civilian student pilots, recent graduates, and instructors. Two of the group interviews (USFA and AFROTC recruiters) were conducted by telephone conferencing, with three members of the research team present to solicit and record responses. Although the same interviewers were not present at each session, a basic set of initial questions was used to ensure a common framework for the data collection. After each session, interviewers' notes were used to create a summary of the impressions from that group. To ensure accuracy of the interviewers' perceptions, the summary was sent to the session members for a review. In addition to the focus group responses, the information gathered from aviation awareness programs was obtained through individual telephone interviews with more than two dozen representatives across twenty programs.

III. Findings

Consistency of Responses

The results from the focus group sessions are expressed as summaries of the participants' impressions regarding the primary questions addressed. Even though these impressions were gathered by differing and multiple interviewers from somewhat diverse subjects in five different groups, the researchers found a great degree of similarity among the responses. As described above, interview subjects included experienced military pilots, military student pilots, civilian aviation students from a variety of backgrounds, and young, recently commissioned officers in temporary recruiting assignments. Yet these independent focus group participants tended to offer very similar views about the interest in the military and in an aviation career that they perceive among the members of the minority communities with whom they interact. In addition, the principal researcher had conducted a similar inquiry among groups from minority communities in 1990-91. Those responses were also quite consistent with the responses from the current study.

Minority Perceptions About Military Careers

Top Minority Students Show Little Interest in a Military Career

Although perceptions differ somewhat among different segments of the population, in general, focus group members indicated that minority students from more affluent backgrounds and those with exceptional educational records - those most eligible for military scholarship programs - are least interested in military opportunities. Unfortunately, when the competition for selection to pilot training slots is greatest, it is these top students that are most likely to compete successfully for those slots. Not surprisingly, there seems to be more interest among competitive students from career military families or in locations near military bases. But among those with less direct ties, a military career is described as the "last choice" for college-eligible minority students. And, as indicated in the next section, these top students are highly sought by many sources, and they often have exceptional opportunities offered from educational institutions and public and private entities.

Many Other Options Available for Highly Competitive Minority Youth

The USAFA and AFROTC focus groups indicated that they face great competition for highly regarded minority students. They suggested that those students, even if interested in aviation, have many options open to them. Large public and private academic institutions, corporations, and even other government agencies are willing to provide incentives to attract top minority students. Many of the nations' top schools offer attractive scholarship programs equal to the free education provided by the USAFA or AFROTC; and they require no service commitment, leaving the students free to choose any opportunities offered upon completion of college. They also have active placement programs to ensure that those students get plenty of exposure for jobs in the public and private sector.

Both corporations and public agencies have aggressive recruitment programs targeted at highly qualified minorities. They have developed strong ties with colleges, not only with the placement offices, but also with individual academic departments, offering attractive internship opportunities and potential jobs with no strings attached after graduation. The project researchers discovered numerous examples of corporate recruitment programs aimed at attracting top minority youth. And in some cases, the corporate programs begin their talent search well before the students have entered college.

In addition to the immediate opportunity for a high-paying job with a top corporation or firm, the most highly qualified minority students also may have offers of scholarships to graduate schools or access to law or medical school programs. Thus, from their high school years through college, the minority students most qualified to become flying officers also have the greatest array of opportunities other than the Air Force, are most in demand, and are, therefore, the hardest to attract with financial/scholarship options.

Interested Minority Students Express an Affinity for Enlisted Army Careers

Among minority communities, a military career is deemed more appropriate for vocationally oriented youth, and the focus group members indicated that this minority subgroup expresses more affinity for enlisted career options and for the Army as their service of choice. In fact, several of the groups

reported that many of the youth they encounter don't really perceive much difference among the various branches of the military and tend to picture "a military career" in terms of the Army combat arms image that they see advertised in the media or portrayed, somewhat unflatteringly, in movies.

Some Aspects of the Military Are Seen in a Negative Light in Minority Communities

Focus group members suggested that many minorities view aspects of military life from a very negative perspective. They see it as a restrictive, dangerous lifestyle in which personal freedom and choices are severely limited. In some cases these attitudes are engendered by parents/grandparents who carry a negative impression based on long-held anti-war sentiments and experiences from the Vietnam era. Some minority community members have articulated their perceptions that the military treats minorities poorly and that the military epitomizes the restrictions and lack of freedom, a position of subordination to "the Man," that minorities have been fighting to overcome for decades. In addition, for many parents, the military is (appropriately) associated with physical danger and with the taking of lives, situations they would prefer to have their children avoid. Finally, for persons from Hispanic cultures, the prolonged family separation that comes with continuous worldwide assignment is an aspect of the military career that is considered a distinct drawback.

Among some of the youth, the aspects of physical danger and even of travel can be somewhat enticing; but the greatest fear for them is length of commitment. For a majority of today's eligible students, the prospect of being locked into a situation for four years, of being unable to just quit if the lifestyle is not to their liking, is repeatedly identified as a major deterrent to enrolling in an officer commissioning program. As several focus groups indicated, to 17-year-old students, four years at the Academy and another five years of active duty seems like a commitment for the rest of their lives.

Minority Interest in Flying Careers

Lack of Interest in Flying Careers Linked to Unfamiliarity with Flying and Aviation

The minority communities' lack of familiarity with aviation in general, and specifically with flying careers, was the factor most consistently stressed

throughout the interview sessions. Most of the focus group participants indicated that their early experiences with flying and their interest in a flying career were considered to be relatively unusual by their friends and other minority community members. And yet, the importance of such experience was made clear by most of the pilots interviewed. Three quarters of the pilots or student pilots could point to some personal flying experiences or aviation-related interests (e.g., model building) that imbued them with "the flying bug," generally at a relatively early age. In contrast, a large percentage of minorities have had little involvement with flying in their childhood. The focus groups indicated that fewer inner city youth and fewer youth from modest rural backgrounds have flown commercially, have visited airports, or have any contact with someone who is associated with an aviation career. They have little knowledge of pilot requirements or lifestyle and are quite unaware of the thrill of flight that attracts people to that occupation.

A Flying Career is Viewed as Too Dangerous

In their interactions with some minority youth, the focus group members found that the youths' strongest perception of a flying career was that it is a dangerous and undesirable activity. In fact many of the focus group pilots reported a common reaction from their own friends and relatives when they first expressed a desire to fly: that "they were nuts" for wanting to pursue a career that could kill them. For those minorities with no aviation-related experiences, the major perceptions about flying come from movies or television. Unfortunately, the media portrayal of a flying career shows predominantly Caucasian pilots and usually in a dramatic situation involving accidents or near crises.

Few Role Models and Little Association of Flying with Minorities

Even with the proud tradition of the Tuskegee Airmen (members of all-African-American flying units that operated so successfully in World War II), few minority members are able to identify minority role models from aviation career fields. Focus group members suggested that most minorities view a flying career as one of those activities that persons of color "don't do." There have been so few role models and little access to opportunities that most minority youth can not picture themselves in that situation. For those who might express some interest, the predominant

feeling is that a flying career is something too difficult to attain: one has to be extremely intelligent or wealthy, or both. And few minorities have had personal contact with, or knowledge of, aviation professionals in their communities. In contrast, many members of African-American or Hispanic communities have some interaction with or awareness of minorities who have been successful doctors, attorneys, clergymen, or businessmen. And, of course, minority doctors and lawyers are readily visible as characters in television shows. Thus, the focus group members suggested that successful African-American students were far more likely to see themselves completing law school or medical school than becoming a pilot.

Minorities Express Regard for Commercial/Military Pilots

Although minorities express little interest in flying careers for themselves, the pilots in the focus groups indicated they personally encounter a great deal of respect among minority community members. The fighter pilots said they are afforded this respect for having achieved an unusual, difficult, and highly skilled position. Commercial airline pilots are also held in high regard for the responsibility associated with their profession. However, without much information about aviation careers, most minority youth think of the minority pilots as rare exceptions and an aviation career as unattainable for themselves.

Perceptions About Minorities' Qualifications for Flying

Interested and Qualified Minorities Do Not Compete Well in the Selection Process

Another concern addressed by the focus groups was the impression among minorities (and even among the small pool of minorities interested in flying,) that they do not compete as well in the selection process. The focus group participants themselves believe that, when the number of pilot accessions is lower and the competition for pilot slots becomes greater, minorities do not seem to compete as well for selection. And some participants suggested that a group of potentially capable minority pilots might be lost in the selection process. In fact, some studies (Cartagena, et al, 1997) indicate that, on the criteria used by pilot selection boards (e.g., Air Force Officer Qualifying Test (AFOQT) scores, grade point

average, flying experience), minority applicants, on average, tended to have lower scores. Thus, a major challenge for recruiting minority pilots is not only to increase interest in flying careers among minority youth, but to increase interest among the group of minority youth who are likely to be most competitive.

Some Non-selected Minority Candidates Might Make Successful Pilots

A number of the focus group participants indicated that, among the pool of interested and non-selected minority pilot candidates, there are some who would make successful pilots if they had met the pilot selection board in a less-competitive year or if they had the advantage of private flying experience that other candidates had. Their rationale was that there is (or ought to be) a point at which the selection criteria indicate a high probability for successful completion of flying training. They conjectured that, beyond this point, higher grade point average or higher AFOQT scores might add little predictive power, but these higher scores may still be used as a deciding factor among well-qualified candidates. They suggested that, in low accession years, there are minority candidates who attain that criterion level but whose selection scores are still not high enough, among the applicant pool, to rate selection for the limited number of training slots. And yet, in a year in which pilot accessions are larger, the same scores might have resulted in selection. The focus group members realized that this situation affects non-minority applicants as well. And they were adamantly against lowering standards to select poorly qualified minorities. But they expressed a strong belief that, among the current small group of interested and qualified minorities, there may be some unfortunately ill-timed applicants who could have been very successful pilots but were not selected. To the focus groups this represents a lost resource for the Air Force. Moreover, some focus group members suggested that the continued non-selection of minority members who are interested in flying and who seem capable but are not selected may serve to reinforce the impression that a flying career is less attainable for all minorities.

Members of one of the instructor pilot focus groups expressed a belief that minorities' lack of flying experience could be linked to performance on the flying-related portions of the AFOQT. They suggested that a person who had previous flying hours would score better on that test than someone

without that additional experience. And they expressed an opinion that fewer of the minority candidates would have the resources to pay for those additional flying hours that might make the difference in their selection scores. Thus, they suggested that some of those interested but non-selected candidates might have been more competitive in the selection process and would actually have made successful pilots if they had had the resources to obtain the training needed for selection.

Other Obstacles to the Recruitment of Qualified/Interested Minorities

In addition to the competition from attractive alternatives, focus group members identified a number of other obstacles that may have hindered the ability to attract interested and highly qualified minority candidates.

Potentially Interested Youth May Have Difficulty Obtaining Information

For some potentially interested students, the usual sources of career information, family, friends and school, are ineffective for learning more about an Air Force flying career. Most parents and family members in minority communities also lack knowledge about the Air Force and about the lifestyle of a flying officer. In other cases the family members are fearful of the danger and separation they associate with the military and will discourage interest in becoming an Air Force pilot. Some school counselors are more familiar with enlisted occupations and lack knowledge about the life of a flying officer or flying careers in general. USAFA and AFROTC focus group members suggested that some counselors or teachers harbor anti-military sentiments and will discourage potential highly competitive applicants from investigating a military career.

Completing the Application Process is Difficult

Several of the focus group members related horror stories about how they almost missed the opportunity to attend USAFA or AFROTC because they had difficulty with the application process and nearly gave up. Often the minority students are the first in their families to attend college, and their parents are not able to provide much help in completing the paperwork and procedures for obtaining an Academy nomination or an AFROTC scholarship. Unless school

counselors can assist, some viable, interested candidates may become discouraged by the paperwork demands of AFROTC or USAFA procedures.

Obstacles Facing Minorities in Undergraduate Pilot Training (UPT)

The instructor pilots and students in flying training discussed the fact that minorities who are motivated to fly and ultimately are selected for undergraduate pilot training still face special factors which may make it more difficult to complete the program. They restated the belief that a large percentage of minorities entered UPT with less flying experience than their non-minority counterparts. From their perspective, this translated into less confidence and greater stress. Additional stress came from having only one or two minority students in a class. They recalled that, when they were in those situations, they perceived themselves as representing their race, and that each mistake or setback was magnified. Moreover, they felt they had less of a close support group among their classmates in which to confide and share their apprehensions.

Recommendations for Increasing the Number of Minority Pilots

The focus groups had several suggestions for increasing the number of minority members selected for and successfully completing flying training. Very few of their suggestions focused on changing the selection criteria. Rather, they centered on planting that essential "flying bug" in the group of highly qualified minority youth most likely to be competitive for selection. They emphasized that that desire to fly, once engendered and nurtured, could help offset the lure of more financially attractive professions that currently attract the most highly qualified minority students. They also stressed increasing aviation familiarity and interest in an Air Force flying career among minority youth in general by expanding opportunities for visits to aviation facilities and hands-on flying-related experiences and by increasing awareness of successful minority aviators. They recommended ensuring that those motivated to fly have a higher probability of succeeding by encouraging better educational preparation early in schooling and by providing access to flying experiences that lead to greater success on pilot selection criteria and in initial

pilot training. They emphasized that most of their ideas were not quick-fix solutions, but were long-term initiatives aimed at changing cultural attitudes and broadening the base of interested and well-prepared candidates. These recommendations were reinforced by the views of the representatives from aviation-related agencies and professional organizations, many of whom are engaged in just the types of aviation awareness and education activities prescribed by the focus group members.

IV. Conclusions

The views expressed by the focus group members, regarding the attitudes of minority groups toward a military career and a flying career, proved to be very consistent and not particularly flattering. Those views clearly imply a lack of interest in a career as a military officer, especially for the most qualified students, and very little motivation to pursue a flying career. The rationale for the feelings about the military career tends to result from both a distrust of the military as a somewhat dangerous and restrictive institution, which does not treat minorities particularly well, and from a feeling that, currently, well-qualified minority students have more promising and lucrative options in other occupations, without the requirement of a multi-year commitment.

The lack of interest in a flying career stems more from minorities' unfamiliarity with aviation in general, a lack of knowledge about a pilot's lifestyle, the scarcity of minority role models in aviation careers, and a perception that minorities are not likely to attain the credentials for this challenging and dangerous occupation.

For those minorities who are interested in an Air Force flying career, the focus groups reported obstacles in applying for the officer programs, perceived difficulties in competing for selection to UPT (due, partially, to less prior flying experience), and pointed to the added difficulties perceived by the small number of minorities trying to complete Undergraduate Pilot Training.

Nearly all the pilots interviewed described their early interest in aviation, spurred by some event or experiences that were unlike the experiences of most of their minority counterparts. To remedy this situation and increase the interest in a military flying career among minority youth, the focus groups prescribed a vigorous program of

advertising and experiences designed to increase the awareness of minorities about the desirable aspects of an Air Force flying career. Given the lucrative opportunities available to highly qualified minority students, the focus group members were doubtful that the Air Force will be able to generate sufficient interest in the short term, without extremely generous financial incentives to high school seniors or college students. They emphasized instead the need to effect a shift in attitudes about flying, by getting minority community members more direct experience with the world of aviation and especially by initiating community programs which will introduce minority youth to flying and get them "bitten by the flying bug." They also stressed the need to get minority pilots into these communities as role models, to remind the youth of the Tuskegee Airmen and other successful minority aviators, and to demonstrate that a flying career is something that is attainable. Finally, the focus groups provided suggestions for eliminating some of the institutional obstacles that hinder those minorities who are interested in a flying career from reaching their goals.

The groups expressed confidence that, with the right initiatives, the perceptions of minorities can be changed and that more, highly competitive and better prepared minority youth could be motivated to attain their wings as an Air Force pilot. With these increased numbers, a greater percentage of minorities should be able to compete successfully in the selection and training processes. However, the pilots were less sanguine about the ability to accomplish this objective in a short time frame. They suggested that a long-term, grass-roots solution is going to have to be implemented before the problems are resolved.

V. References

Barucky, J.M. (1998). Effect of future demographic and socioeconomic trends on the Air Force personnel system: Minority pilot focus group study. Informal Technical Report under F41624-95-D-5030. Brooks AFB, TX: Human Resources Directorate, Armstrong Laboratory.

Cartagena, S. M., Stone, B., Fast, J., Zelenski, W.E., & Weeks, J. (1997). Improvement of the integrated decision modeling system and application to flying training candidate selection. Technical Report under F41624-95-5030.

Brooks AFB, TX: Human Resources Directorate, Armstrong Laboratory.

Stone, B. M., Turner, K. A., and Looper, L. (1997). Effect of future demographic trends on the Air Force personnel system. Paper presented at the 37th Annual Conference of the International Military Testing Association, Sidney, Australia.